COURSE OVERVIEW: 2018 HYDROLOGIC ALTERATION UNDER THE CLEAN WATER ACT

Course Goals:

- Develop a basic understanding of the types of impacts caused by hydrologic alteration and the associated restoration options for those impacts.
- Develop a working knowledge of the authority that EPA has to address hydrologic alteration (both prevention and restoration) under the Clean Water Act.
- Develop the ability to analyze hydrologic alteration issues and understand how to apply Clean Water Act authority.
- Work through at least one hydrologic alteration project relating to a current Region 4 hydrologic alteration issues, and analyze and understand the Agency's role and authority in that process and development materials to share with class and Flow Work Group members.

Class components and expectations:

- Homework. Read through the materials in advance of each meeting. Come prepared to work through the exercises for each section at the following meeting.
- Practicum. Participate in offered practical experiences, such as attending programmatic meetings within EPA and with states and tribes relating to hydrologic alteration, conduct field work or attend webinars.
- Project. Work on your selected project and develop final, reviewed materials to share with the class and the Flow Work Group.
- In the News. Issues relating to hydrologic alteration are everywhere – sometimes as the main issue or sometimes as an underlying issue. Be on the lookout for articles, news stories or issues that come up and bring these to the meetings. Look for them both in the mainstream media, as well as in your technical/legal work. When we have time, let's talk through them during the meetings. Is there a role for the Agency? Would CWA authorities apply?

Course Structure:

Each class, after the first 90-minute class, will be two hours. There will be one hour to present a CWA program and how hydrologic alteration is addressed in that program. After each class, the staff will read through the applicable statute and regulations, as well as applicable policy and guidance for that program. For 'homework', participants will analyze the case specific facts and come up with their interpretation on how the issue should be addressed under the CWA. Feel free to work together on this, set up meetings to talk through it or just ask questions. For the first hour of the following class, we will go over your thoughts and then discuss the actual outcomes on each issue and provide the actual Agency or Judge's decision.

This course is flexible. As this is the first time it is offered in this format, we can add meetings, subjects, issues or topics. We can expand or delve into topics in more depth if needed. The course is designed to be specific to the authority of the Clean Water Act. It will not go in-depth on the technical issues. For instance, you might get a cursory overview on the different methods to develop environmental flows but you will not leave the class being able to run the IHA or PHABSIB model.

There will be six meetings over six months formatted as follows:

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Date/ 2018	First Part of Class – Intro or Review	Second Part of Class – New Info	Homework for Next Class (material provided)
Jan 25	Intro to the Class/Course Overview and Expectations for the Participants (30 minutes)	○ WQS basics, implicit vs. explicit WQS, example WQS for hydrologic alteration. ○ Section 401 basics for HA. ○ Legal authority to address flow/HA under the CWA.	○ Review Statute and Regs ○ Excerpts/Flow Technical Paper ○ WQS Handbook sections. ○ Deleted Case Law appendix. ○ Review in-house draft criteria. ○ Project Outlines
Feb 22	1. Project Outline Presentations. (5 min/each) 2. Follow-up/Questions from WQS section.	What is a WQS as it relates to water quantity? 1. The 4-part test. 2. What is a mandatory duty lawsuit? 3. Are states water resource planning or setting new standards? 4. Florida MFL example.	Read the following synopses and come to class prepared to discuss "Did the State set new WQS?" 1. Maine alewives 2. SC WWR 3. CA TUCP
Mar 15	Review the 3 cases and discuss actual outcomes.	CWA Section 303(d), Monitoring and Assessment. Pollution v. Pollutants. Criteria v. Use. Category 4C	Read the 2016 IR Guidance. Review specific impacts - are they impaired? Is it pollution, pollutants or both? What category?
Apr 19	Review the guidance and how those waters were actually addressed.	Section 404/(b)(1) Guidelines; NEPA; legal authority for commenting; project impacts; water conservation and efficiency.	Review the 404 (b)(1) Guidelines, Water Conservation & Efficiency Best Practices (Executive Summary). Review Glades, Lancaster Reservoir. What comments can EPA put in to avoid, minimize, or mitigate?
May 17	Review the projects. What did you think were the impacts? What would you have recommended? Review Agency comments, Water Control Manual in the news.	In many areas of the country, flows are being reduced by surface and groundwater extraction. How does GW extraction affect SW? How do reduced flows affect NPDES dischargers? What is the 7Q10?	Review the videos on the hyporheic zone and groundwater impacts. Read the WQS handbook on 7Q10 and NPDES permitting. Come prepared to discuss what 7Q10 is – and isn't – and to discuss where in Region 4 you are most likely to see impacts from GW extraction.
Jun 21	Review 7Q10. Review impacts to GW.	Project Presentation Updates and Wrap-Up.	

Course Presenters:

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